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RAILROADS VERSUS CANALS.

BY J. A. LATCHA.

THE collapse of industry and commerce in the United States during the past five years has been due primarily to commercial war. That warfare has raged among men with varying intensity from the days of primitive man, when organized forays were made upon hostile tribes, and men, women and children were murdered or stolen, together with their goods and chattels. Modern methods are somewhat different, but the results are practically the same. The commercial depredations of one nation upon the accumulated wealth of others are to-day almost as ferocious and destructive as in the dawn of man's history.

The yeomanry of Great Britain have been for centuries the pride of that powerful Empire, and have been the theme of her bards for generations. Yet to-day the yeomanry class of the British Isles is almost extinct, and the wealth and power of England rest upon the delvers of her mines and the toilers at her furnaces, not classes to incite or enjoy epics, and especially not classes usually inspired with a passionate love of country, without which no nation long can continue a masterful people. It must be clear that the decadence of the agricultural interests of Great Britain has been almost entirely due to the enormous growth of our cereal interests. In the brief period of a quarter of a century our husbandmen seized the wealth of Europe, entailing bankruptcy upon the rustic population of Great Britain, Germany and other Continental countries. In the fulness of time India, Argentina, and Australia pressed to the front, contending with us for wealth and power, pouring their grain upon manufacturing Europe to our commercial undoing. Argentina, among the youngest and most vigorous of our opponents in the grain markets of the world, has become bank-

rupt in the struggle, and to meet interest on her debt must sell her products at a loss, if necessary, to meet the exactions of her taskmasters. Under the stress of this necessity her pauper labor groans and agonizes, and our freemen suffer with their fellow-men of the antipodes. But, destructive to the agricultural interests of the United States as has been the competition of the foreign countries named, a more powerful and a more dangerous opponent for us is pushing to the front, and we must prepare to meet this competition or be relegated to the rear.

The vast empire of Siberia is now girdled by a government railroad from the Ural Mountains to the Amoor River, and before 1905 that railroad will be completed to the Pacific Ocean. But more important to us is the fact that a government railroad is now building to connect that Siberian railroad at Perm in Russia with the Dwina River, giving access to Archangel on the White Sea for the wheat from Western and Central Siberia. The country thus open to northern Europe, and especially to Great Britain and Germany, is similar to the Dakotas and Minnesota both in soil and climate. The short distance from Archangel to London and to Bremen and Hamburg renders this threatened competition of prime interest to us.

Thirty years ago the writer assisted in surveying one of our pioneer trans-continental railroads from Kansas City, then a frontier town, through Kansas, Colorado, New Mexico and Arizona to California, investigating routes to San Diego, Los Angeles, and across the Sierra Nevada Mountains at Tehachapi Pass, thence through Tulare and San Joaquin valleys to San Francisco. Much of the territory traversed by those exploring parties never until then had been trod by white men. Having crossed the continent, the western half of which was then a virgin world, the writer had not the faintest conception of the mighty changes the construction of the Pacific railroads would cause, not only in our own growth and commerce, but in the commercial relations of the entire world, nor, it is believed, did others forecast the future greatness of our nation. But in the light of the history of the last thirty years we can foresee how far reaching and equally astounding will be the revolution in the commerce of the world caused by the opening of Siberia by railroad, resulting undoubtedly in Russian control of the trade of the Chinese Empire.

The course of commerce in the ages past marked the limits of empire. Caravans for centuries traversed the gardens of well-watered valleys and sterile wastes lying between China and India in the Orient, and Phœnicia, Egypt, Rome and Carthage, the then Occident. That commerce created the mighty cities of Babylonia, of Assyria, of Persia and of Syria.

The opening of the commercial route by water between the East and Western Europe, by way of the Cape of Good Hope, gave the death blow to the trade of Venice and other cities on the Mediterranean Sea, and Poverty spread her tattered mantle over the wealthy and voluptuous Republics of Italy. The opening of that water route by the hardy and fearless seamen of Portugal transferred for a brief period to that nation the seat of wealth and commercial empire. The military disasters of Portugal enabled the Dutch to seize the trade of the Orient, and for years the wealth of the Far East flowed in upon Holland, making that the most opulent of nations. The passing of William and Mary from the Netherlands to Great Britain carried the heirship of the mastery of the commercial world to the British Islands, where it still remains.

Great as have been the changes in modern times in the commercial domination of the world by various nations, this generation has seen mightier changes in the channels of commerce than centuries witnessed in the ages past, but greater and swifter changes perhaps may be seen by living men. The Suez Canal was built notwithstanding the strenuous opposition of Great Britain, restoring the flood of commerce to the channels opened by the kingly Egyptian Pammethichus, thousands of years ago. Again the waves of the Mediterranean Sea lave the argosies, carrying the wealth of "Ind and far Cathay." The cities of Britain and of Southern France, peopled by virile nations, are clothing themselves in purple and fine linen, the trophies of that traffic. Perhaps again wealth and luxury, pomp and power, may crowd and beautify the ancient cities of Italy as in their regal days.

The Mediterranean Sea for thousands of years witnessed the ebb and flow of the commerce of the world, but the Pacific railroads opened a new world for supplying food for the nations. The trade of the mysterious and hoary East issuing from the dim ages; the trade Alexander looted, yet did not check in its steady, indolent flow *westward*, has started for the first time in six thou-

sand years, on its *eastward* way to the new world. Will it continue on this new route ?

This is the question of the age ; how shall we answer it ? What must we do to meet the efforts of Australia, of Argentina, and especially of Russia and Siberia to control the markets of the world ? What must we do to retain and increase the stream of commerce to our shores from Japan, from China, and from the musty, languorous, and jewelled East. That trade has goldened the sceptre and gemmed the crown of the rulers of the world for ages untold. It has flown westward since historic times, and will so continue unless we can force it eastward over our continent from Portland, from San Francisco, and from Los Angeles to Boston, New York, Philadelphia, and other Atlantic ports.

We are told we must build ship canals to meet the contending forces battling for the control of the commerce of the world. Canals for the work of the twentieth century ! The most important works of the character proposed are a ship canal through New York State from Albany to Buffalo ; another along the route of the Chicago Drainage Canal to the Mississippi River, and a third the Nicaragua Canal.

In an article on " Cheap Transportation in the United States," published in the NORTH AMERICAN REVIEW for May, 1897, facts and figures are given clearly showing that traffic could be carried by railroad from Chicago to New York City at a total cost of $2\frac{1}{10}$ mills per ton mile, and that grain could be hauled from Chicago to New York Harbor for three cents per bushel, and that this cost would be less than by ship canal between the same points. Hence it is not necessary in this article to consider all details touching the New York State canal. There are, however, a few facts which should be explained, that the folly of depending in any way upon such a canal may be apparent.

It is not denied but is asserted that a ship canal, if built of the width and depth of the Baltic Canal, whether by New York State or by the St. Lawrence River, would greatly benefit portions of the Northwest. But it is all important to know what portions of the Northwest would thus be benefited and what would be the result of building that canal to our nation at large. To determine this we must go to the foundation of the question at once. If Canada and the British Northwest belonged to us, and by their revenues aided in bearing the burdens imposed

upon us in maintaining our nationality, this question would be greatly simplified. From Manitoba to the Rocky Mountains lies the finest wheat country on our continent. That territory is nine hundred miles long by two hundred and fifty miles wide. It has few if any "bad lands," such as are in Dakota. Its soil is generally deep loam; its climate is severe in winter, as in Dakota and Minnesota, but the summers, though short, are very warm, insuring certain crops. (More than one-third of that vast territory is arable, and when thoroughly developed would produce annually from 500,000,000 to 750,000,000 bushels of wheat, while the wheat crop of the entire United States does not now average more than 500,000,000 bushels annually. The Dominion government a few years ago expended thousands of dollars in transportation and supplies to aid settlers upon those lands. The serious decline in prices of all grains rendered it impossible for the Canadian Pacific Railroad to transport the crops from that territory to market at a rate which would leave income sufficient to support the producer. The result was the settlers who were able to leave deserted the country. With a ship canal, however, which would permit the largest ocean steamers to go to and from the west end of Lake Superior, wheat could be grown in that vast region and be marketed in Europe at prices which would utterly destroy the wheat and corn markets of the United States; for nothing can be more evident than that if the British Northwest produce millions of bushels of wheat in excess of that now grown in the United States, the price of that cereal would fall and corn would accompany it in its downward course. But that wheat would not seek Duluth for market, much less would it seek Chicago. The Canadian Pacific Railroad would extend branches throughout that territory and control the carriage of the grain to water, and their water port would be Port Arthur. That grain would not seek New York City for a market, but would traverse the natural water route to Montreal, which would be the great financial centre controlling that commerce, destroying the grain export business of New York City.

When the writer was building the Duluth, South Shore & Atlantic Railway, the Dominion government began the construction of its ship canal around Sault Ste. Marie on its own territory. At that time, it was repeatedly stated, a principal reason for building that canal was to prepare for diverting the milling business

of the Northwest to the Dominion side of the Sault Ste. Marie. The vast power which could be developed at that point must be apparent. While our wheat supply comes from Dakota and Minnesota, Minneapolis can control that business. But the day a great ship canal is built from the ocean to the British Northwest will see the milling interests removed to the Canadian side of the river, destroying the Minneapolis milling business just as certainly as that of Rochester was destroyed by the development of our Western wheat fields.

When the British Northwest can raise and ship by canal 100,000,000 bushels of wheat, British capital will build the Georgian Bay Ship Canal, and every ton of traffic from the Lake Superior regions to the ocean will traverse British territory, leaving Detroit, Toledo, Cleveland, and Buffalo hundreds of miles from the direct route to the ocean. The bulk of the traffic of the great Northwest will be carried on British vessels, manned by British seamen, and destined largely for British ports. The truth of this must be obvious, because it is well known that but one distinctively American steamship line is engaged in carrying the world's commerce between the United States and Europe, while a dozen such lines are operated by British, German, French, and other European companies. With free access for British vessels to our great lakes, American shipping would be drawn from those waters; the low wages paid seamen by Great Britain would drive our seamen from our inland seas; the shipbuilding industries at Detroit, Cleveland, and other lake cities would be seriously crippled or destroyed. But more disastrous than all these, the agriculturist in the United States would be hopelessly impoverished. Our Canadian neighbors are able diplomats and keen business men; they know precisely what they want, and hope and believe they can induce us to bear the cost of satisfying their wants. Thus far their waterway conventions at Toronto, Cleveland, and elsewhere have amply met their most sanguine wishes. But should we build that canal before the British Possessions become part of our territory we would perpetrate the monumental folly of all ages, a folly only exceeded by the Trojan's theft of the Grecian Horse.

The Chicago Drainage Canal is lauded by some enthusiasts as the initiative of our emancipation from all ills, commercial, financial, and industrial. The Drainage Canal certainly is a great work and its managers are worthy of praise for the ability dis-

played in its administration. We must note, however, that the Drainage Canal is not finished ; it is still unfortunately in the probationary period of "estimates," the bane of all great and new enterprises. The man of experience knows that on a final settlement thousands of trifles are apt to swell the estimates to reprobated totals far in excess of all belief. Let us await the final completion of the Drainage Canal ; let us see it used for a ship canal instead of for drainage purposes alone ; let us see the navies of the world sailing down the Illinois River to St. Louis and returning in safety to Chicago, the centre of commercial activity at the heart of our continent. We then will know infinitely more about ship canal transportation than we are apt to learn from canal enthusiasts.

A few simple, perhaps homely, facts are suggested for the consideration of those not subject to the ship canal mania. The Father of Waters flows on to the ocean placidly, as for nameless centuries ; his broad bosom cheerfully will bear the commerce of the world if it desires to seek his course. The Gulf of Mexico and the ocean offer boundless accommodations for the sails of every nation, and yet the traffic to and from the Central and Western States has its course upon the railroad thoroughfares connecting St. Louis and New York City. If the open waterway of the Mississippi River from St. Louis, which seldom is frozen and which is not impeded by locks, cannot attract the traffic *via* the ocean to New York City, can it be possible that traffic from the south and west of St. Louis will seek the Illinois River, with its dams and locks ; will traverse the Drainage Canal, with its obstructions and odors ; will go north three hundred miles to the Straits of Mackinaw and return to Detroit, thence to Buffalo, thence by canal, passing lock after lock, to Albany, thence down the Hudson River to New York City, frozen as this entire route is during four months of the year ? It is worse than folly to propose canals as a means of relief to the Central, Western, and Southern States.

If the traffic of the Central States will not go by the Drainage Canal and thence by the Great Lakes, will the dream of other canal advocates be realized, that ocean steamers will be laden at the docks of Chicago, thence sail among the cornfields of Illinois to St. Louis, thence to New Orleans, then to Europe and the uttermost parts of the earth ? No one familiar with the shifting

sandbars of the Mississippi River will heedlessly pledge the revenues of the United States to opening and maintaining a ship canal along the channel of that mighty river. That dream is utterly impracticable. All the revenues of our government would not accomplish it. Mr. Jay Gould, one of the ablest business men our country ever produced, made strenuous efforts to divert the business of the far West down the Mississippi River to New Orleans, and thence by ocean to New York and to Europe, and he abandoned the effort as hopeless. Before we succeed in diverting the traffic of the West down the Mississippi River, a greater than Mr. Gould must arise to shame his fruitless efforts.

Perhaps the most remarkable canal infatuation of history is that of certain of our citizens for building the Nicaragua Canal to enable the people of the United States to dominate the commercial world and, collaterally, to restore prosperity, wealth, and power to our nation. What interest have we in Nicaragua? Must we expatriate millions of our people to Central America that we may control the traffic of the world? Cannot we furnish support to our people within the borders of the United States and dominate commercial affairs? Has it come to pass that we, like other nations, not only are unable to furnish asylum to the oppressed of earth, but are unable to furnish support to our sons? If so, surely our glory has departed. We desire the trade of Peru and Chile, but this we can secure and yet not endanger the control of the trade of the Orient now seeking our shores. That commerce created empires; the loss of it destroyed them.

If we build the Nicaragua Canal the commerce of Japan, of China, and of India would seek that channel and would be carried upon European vessels, by European seamen, for European benefit. Not a ton of that old world trade would pass the ports of Portland, of San Francisco, or of Los Angeles for our Atlantic coast or for Europe. The semi-tropical fruits of California would be crowded out of the markets by those from Nicaragua and other Central American countries adjacent to the pathway of the ocean vessels passing that canal. Our Pacific coast trade would be blighted and destroyed as was that of the cities of the Mediterranean when the world's commerce was diverted around Good Hope, and we would not have developed sufficiently in the commercial struggle of the world to leave even respectable ruins to posterity.

The struggle for commercial supremacy to-day lies between Great Britain, Germany, and Russia and the United States. Germany is to-day a greater factor in manufacturing than Great Britain, and this fact in a few years will be fully realized throughout the commercial world. The leading trade journals of England are complaining bitterly that German ironmasters are underselling their manufacturers to English railroad companies, and are even heatedly demanding *protection* from this outrage! Protection in England! Marvellous times are upon the world when this cry is raised there. Russia, with its vast resources in Siberia ready for development and furnishing food supplies to Germany, and Germany underselling Great Britain in her home markets, is the situation before us. If commercial treaties now existing between Russia and Germany continue close and satisfactory for twenty-five years men now living may see the British Empire so crippled commercially and financially as to change the entire political aspect of Europe. These facts must be patent to all close observers of commercial war.

We cannot open the Nicaragua Canal without becoming involved in the diplomatic quarrels, the growth of centuries, in Europe. Are we strong enough as a naval power to enter the lists, not only against Great Britain, but against Germany and Russia?

Can we dictate the policy of the Nicaragua Canal if we build it? Can we defend it against the world if our interests demand it? If not, we dare not build it? Our commercial salvation at this time demands that we stake our all on the maintenance of the Monroe doctrine. We must delay the opening of the Nicaragua Canal by every diplomatic device to the latest date possible. But when it is opened we must own and operate it solely for the purpose of forcing all traffic crossing the limits of the American continent into channels within the borders of the United States. To accomplish this result, we must make such improvements upon our great railroad system as would enable us to carry the world's commerce at vastly less cost than now governs, and in doing this we would increase the tonnage carried on our lines of transportation. This action is essential for our self-preservation, and must be had before Russia opens the Trans-Siberian Railroad and perfects its outlet to the White Sea.

The failure of the wheat crop throughout the world, other than the United States, in the years 1896 and 1897, has been one of the remarkable incidents of modern times. Time and opportunity thus have been given our nation to fortify itself against the mighty shock to our industrial, commercial, and financial stability certain to fall upon us if there are bounteous wheat crops in Russia, Siberia, India, Argentina, and Australia in 1898.

The building of our Pacific railways was the work of giants. But the boundless advantages flowing from the opening of these highways across our continent must not satisfy our ambition nor paralyze our energy. Continued activity is essential if we are to advance in wealth and power. We must perfect a short, low-grade railroad from Chicago to New York Harbor upon which the agricultural product of the far West can be carried at a cost so low that we can deliver our breadstuffs in Europe at a price no other nation can meet. It is entirely practicable for our trunk lines by united action to assure the completion of such a thoroughfare and at a trifling cost, measured by the advantages which would accrue to the commerce of the United States, and collaterally as well to the railways. Measures must be taken to create a new era of commercial activity from the Mississippi River to the Pacific coast. The building of the pioneer Pacific railways, opening the vast resources of our country in the western half of our continent, stimulated industrial activity in every portion of the United States from Maine to Lake Superior and the Gulf. The reduction of cost of transportation from the Missouri River to San Francisco inaugurated in 1868 by opening our Pacific railways was primarily the cause of our stupendous growth in population, wealth, and power. We again can start a revival of business activity by like methods. Let our statesmen and business men emulate the wisdom, fearlessness, and energy of those remarkable men who inaugurated and carried to successful completion the building of the Pacific railways.

No greater mistake under existing industrial and commercial conditions could be made by the government than to take possession of the Pacific railways, merely for the purpose of enabling the state to realize its claims, by selling those properties to the highest bidders. The close of the century should be marked by the adoption of a broad and wise policy in adjusting the Pacific railway questions. Those railways should be owned abso-

lutely by the people. Heretofore, the government has been merely a creditor of the Pacific railway corporations, powerless to direct the policy of those great commercial thoroughfares. It is unquestionably true that to-day the majority of voters are averse to direct government operation of railroads. Nevertheless, there is a powerful, active, and growing minority bitterly opposed to the sale or cession of those railways to any private corporations, and should they be disposed of absolutely to private companies there would be a perpetual cause of complaint against capital throughout the West and South, which would grow in bitterness if our industrial condition does not decidedly and speedily improve. The wise course for all interests, doubtless, would be for the government to assume direct and absolute ownership of the Pacific railways and create by national legislation such operating companies, as may be found judicious, to administer the affairs of those properties. The objections to government operation of railroads would thus be avoided, and yet every practical advantage possible to the people would be assured by the creation of private operating companies, acting solely as agents of the State under stringent agreement, the violation of any portion of which could be checked instantly by the heavy hand of the government, vested with autocratic power to direct the management of those roads within the lines and limitations of the charters granted. This method of operating the Pacific railways would be advisable even in the interests of private capital, for unless measures are taken to prevent the continuous and disastrous shrinkage of accrued values in the United States the distress among the people will increase, and demands will be made for the practical confiscation of railroads in the erroneous belief that such desperate measures would relieve the pressure of hard times.

For a quarter of a century the Central Pacific and the Union Pacific railways have been operated on a radically antagonistic basis. If reorganized independently, that suicidal policy would be continued indefinitely by these companies. If united as one through line, the interests of the entire United States would be served, and that this should be done is absolutely essential for the welfare of the railroads as well as of the people.

If the Pacific railways are owned by the government and are operated by private corporations under the control of the State,

it would soon be made clear to the majority of the voters that our great railroad properties are operated economically, judiciously, and legitimately by our private citizens. That fact demonstrated, the demagogic cry for confiscation of private railroads for public use would cease. Then private capital would be safe, and with safety would come confidence, and with confidence enlarged and active use of money in the development of our unlimited resources. Then would dawn a new era of prosperity to bless our country.

It must be evident the future development of the United States is largely dependent upon the improvement of our railroad system. In the East, such improvement would enable us to control the food supply of the world, as we could reduce the cost of carriage on wheat and corn from Chicago to New York at least eight or nine cents per bushel. With that reduction we could undersell Russia in Europe even on the grain exported by the White Sea, and the Dakota and Minnesota wheat growers would flourish as they have not for a decade, while the Dominion Northwest would still linger in Cimmerian darkness.

The Pacific railways under government ownership could be greatly improved in gradients and alignment to meet the necessities of the times. These results could be attained at relatively trifling outlay of money, and when these traffic avenues were thus improved and freely open to the use of all the granger and trunk line railroads, gradually but surely the flood of commerce would traverse their tracks. This would stimulate the Oriental business across our continent, and the revival of business throughout California would cause the growth of the entire Pacific Coast to surpass that of any period of our history ! As the trans-continental tonnage increased, the freight charges on lines between the Mississippi River and the Pacific Coast would be decreased gradually to the same level as governs east of St. Louis and Chicago, repeating the known history of the growth and development of the trunk line railroads during the past twenty years.

Those who advocate the building of the Nicaragua Canal as a commercial enterprise for the people of the United States certainly cannot realize what that implies. It is well known that half of the wealth and industrial and commercial activity in the United States lies in a territory five hundred miles wide, extending from the Atlantic to the Pacific, with the centre line of that

territory extending in a straight line from New York City to San Francisco, Chicago being the commercial centre of that territory. Good judgment should teach us to serve the interests of the 70,000,000 of our citizens within the United States. This can be accomplished only by ceaseless efforts to develop the traffic avenues where our industrial and commercial establishments are now in full activity, insuring the stream of commerce through the heart of our continent where our people dwell and where our wealth and interests lie. Any other course commercially would be suicidal.

If we have ordinary business acumen we will endeavor to render available and remunerative the \$200,000,000 invested in the Pacific railways between San Francisco and Omaha and Kansas City. To invest another \$100,000,000 and more likely \$150,000,000 in the Nicaragua Canal would render it utterly impossible for us to earn income on the money the government and our citizens now have invested in the trans-continental railroads from the Missouri River to the Pacific. Instead of spending \$100,000,000 to \$150,000,000 opening an artificial waterway thousands of miles from our people and our property, which the combined navies of Europe could dominate, it would be wise to spend \$100,000,000 on our navy and in erecting military defences for our great cities, thus insuring our national safety; and then to construct such additions and improvements to our system of trans-continental railroads as would enable us to carry the commerce reaching our Pacific Coast cities from the Orient, through the heart of the United States to New York City and thence to Europe, at no greater cost than the same traffic could be transported from the Orient to Nicaragua, thence through the canal, paying tolls on that costly work, and thence to Europe.

The 80,000,000 population of France, Italy, and Spain are largely supported by income received from the United States for products which can be raised successfully in California. If the lands in that State were fully irrigated and under cultivation, California could support 20,000,000 population, while to-day it has but 1,500,000. Three-quarters of the wines now made in California are comparatively worthless, but one-quarter is far superior to much of the so-called wine imported from Europe, demonstrating that the soil and climate of certain portions of the State are peculiarly adapted for producing the finest quality of

pure grape wine, infinitely preferable to and cheaper than the drugs imported from Europe. Oranges, lemons, prunes, raisins, and other like products can be raised to perfection and in profusion in California. Sugar can be manufactured in that State in sufficient quantity to supply the United States and of a quality equal if not superior to that imported from Germany. It is primarily a question of cost of inland railroad transportation whether the products of our own soil shall supply the people of Maine, New England, and the Central States with these articles, replacing those imported from Europe. With cheap railroad transportation from the Pacific Coast we could retain within our borders millions of gold now annually exported to foreign countries. If California is ever to become a great, populous, and wealthy State, it must be by means of cheap access by rail to the 70,000,000 Americans east of the Sierra Nevada Mountains. A dozen Nicaraguan canals would not people the Golden State or develop its resources.

The trans-continental railroads have already been of incalculable advantage to the Pacific Coast. If these railroads are improved by cutting down the grades and straightening the alignment, and if the most perfect modern appliances for carrying traffic at low cost be introduced on those thoroughfares, not only would infinitely greater advantages result to the Pacific slope, but these benefits would extend to every portion of our country. With perfect transportation facilities by rail we could carry wheat from the interior States to San Francisco and Puget Sound ports and deliver millions of bushels of wheat in China. But this will be possible only by waging a constant and relentless commercial war against Russia, which will, in a very few years, be pouring its Siberian wheat into China over its Chinese branch, that certainly will be completed within five or six years.

The Central Pacific Railway has a grade extending 120 feet per mile, crossing the Sierra Nevada Mountains eastward. That grade could be reduced to 75 feet per mile for a trifling expenditure, measured by the advantages to accrue in cheapening cost of transportation across our continent. Other improvements could be inaugurated on that railway which, in five years after perfecting the same and the opening of its tracks to the free use of all the granger and trunk line railroads, would reduce the cost of transportation between San Francisco and Ogden to a maxi-

imum of five mills per ton mile, and through tonnage from Asia and from California, when made up in full trainloads, could be hauled to Chicago at $1\frac{7}{10}$ mills per ton mile. The Union Pacific Railway has needlessly heavy 'grades west of Cheyenne, yet coal for motive power can be secured so near its tracks, through Wyoming and Utah, that with the Central Pacific Railway open freely for its use, and of the trunk lines, it would be enabled to increase its tonnage, and therefore to reduce its operating expenses until that line also could certainly be operated for five mills and could carry through business in trainloads between San Francisco and Chicago at $1\frac{7}{10}$ mills. Like conditions would govern on the main lines of the granger roads between Chicago and Omaha. Through tonnage could be hauled in trainloads from Chicago to New York on a short, low-grade road for $1\frac{2}{10}$ mills, and that traffic could be carried from San Francisco to New York City, under the conditions described, for a total average cost of $1\frac{5}{10}$ mills. Details can be given clearly demonstrating the correctness of these statements.

If general traffic from the Orient and fruits and like products of California could be carried from San Francisco to Chicago and New York by railroad at a cost as low as would be charged on like commerce between the same points by the Nicaragua Canal, it must be evident there would be no pretext for building that canal. A few figures will demonstrate that our railroads could carry trans-continental commerce between San Francisco, and Chicago, and New York, at practically as low cost as could a canal, if the grades and alignments are improved on our railroads, as explained herein. The distances from San Francisco to Chicago and New York by the proposed low grade, short line railroad would be as follows :

San Francisco to Chicago.....	2,357 miles.
Chicago to New York.....	850 "

Total San Francisco to New York.....	3,207 miles.
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The distances from San Francisco to Chicago and New York by the Nicaragua Canal route would be as follows :

San Francisco to New Orleans, about.....	4,250 miles.
New Orleans to Chicago, by railroad.....	923 "

Total distance from San Francisco to Chicago <i>via</i> New Orleans.....	5,173 miles.
San Francisco to New York direct, about.....	5,000 "

Oriental business by canal would require no transfers for Chicago, except at New Orleans, nor for New York City except for warehousing and again for loading on cars for inland distribution.

California business would require transfer at docks in San Francisco Harbor for canal, but would require no such transfer at San Francisco for shipment by rail direct to Chicago and New York City. That traffic would be already loaded on cars for distribution to consumers at eastern points.

The transfer charges at San Francisco would average at least twenty cents per ton each for loading and for unloading all tonnage passing docks and warehouses, making a total charge for transfers of forty cents per ton. Like charges would rule at New Orleans on all business carried by canal to the latter point destined to Chicago or for inland distribution. The port charges at New York are notably greater than at any port in the United States. But in order to make the best showing for canal traffic the charge for transfer at New York will be fixed at the common cost of forty cents per ton.

It is well known to railroad and commercial men that the earnings from through business of the Pennsylvania Railroad has never exceeded 10 per cent. of all its tonnage. Judging from this well-known commercial fact, the business to and from California would certainly be five or six times as great as that to and from the Orient, even when the interchange of commerce with India, China, and Japan should reach an enormous volume. Hence the importance of shaping our efforts to serve the growing business interests of the Pacific Coast States of California, Oregon, and Washington.

The cost for fuel on the Pacific would utterly preclude carrying commerce by the Nicaragua Canal at as low rates as between New York and Liverpool. Nevertheless, that the most favorable showing shall be made in case of canal traffic, the ocean charge by that canal will be fixed at $\frac{5}{100}$ mill per ton per mile. The extra expense of navigation through the canal, together with tolls on cost of that waterway, certainly would equal, and for many years unquestionably would greatly exceed, the present charge on the Baltic Canal, simply because ten vessels now use the latter canal to one that would use the Nicaragua Canal if in operation to-day. But using the operations of the Baltic Canal

as a basis of measurement, the toll and extra cost of operation of the Nicaragua Canal would average one dollar per ton.

The charge on the railroad from New Orleans to Chicago will also be made the same as on the trans-continental line, although unquestionably the gross amount of tonnage on the North and South lines never would equal the East and West tonnage, and the amount of tonnage on any given line of railroad, other things being equal, usually regulates cost of operation.

With the explanations made, the relative cost of transportation from San Francisco to Chicago and New York City would be as follows :

On Oriental business from San Francisco to Chicago and New York :

Chicago Business <i>via</i> Ogden.		New York Business <i>via</i> Ogden.	
Transfer at San Francisco.....	\$0.40	Transfer at San Francisco.....	\$0.40
2,357 miles rail haul, at 1 $\frac{1}{2}$ mills	4.12	3,207 miles rail haul, at 1 $\frac{1}{2}$ mills	4.81
Total cost per ton.....	\$4.52	Total cost per ton.....	\$5.21
Chicago Business <i>via</i> Nicaragua.		New York Business <i>via</i> Nicaragua.	
4,250 miles to New Orleans, at $\frac{5}{8}$ mills	2.45	5,000 miles to New York, at $\frac{5}{8}$ mills	\$2.75
Tolls and extra cost of operation through canal.....	1.00	Tolls and extra cost of operation through canal.....	1.00
Transfer at New Orleans.....	.40	Transfer from vessel to cars ready for distribution.....	.40
Railroad transportation New Orleans to Chicago, 923 miles, at 1 $\frac{1}{2}$ mills.....	1.62		
Total cost per ton.....	\$5.47	Total cost per ton.....	\$4.15

On California business from San Francisco to Chicago and New York :

Chicago Business <i>via</i> Ogden.		New York Business <i>via</i> Ogden.	
2,357 miles railroad haul, at 1 $\frac{1}{2}$ mills.....	\$4.12	3,207 miles railroad haul, at 1 $\frac{1}{2}$ mills.....	\$4.81
Total cost per ton.....	\$4.12	Total cost per ton.....	\$4.81
Chicago Business <i>via</i> Nicaragua.		New York Business <i>via</i> Nicaragua.	
Transfer at San Francisco.....	\$0.40	Transfer at San Francisco.....	\$0.40
4,250 miles to New Orleans, at $\frac{5}{8}$ mills.....	2.45	5,000 miles to New York.....	2.75
Tolls, etc.....	1.00	Tolls, etc.....	1.00
Transfer at New Orleans.....	0.40	Transfer at New York.....	.40
Railway transportation, New Orleans to Chicago, 923 miles, at 1 $\frac{1}{2}$ mills.....	1.62		
Total cost per ton.....	\$5.87	Total cost per ton.....	\$4.55

It would require five days to transport through freight by fast express trains from San Francisco to Chicago, and seven days from San Francisco to New York. It would require at least

twenty days to transport that traffic by Nicaragua either to Chicago or New York. The interest charge on value of commodities transported via Nicaragua would in every case add greatly to the cost of canal carriage, compared with that by rail. Hence while cost of transportation from San Francisco to New York by canal would be less than by railroad, yet as the tonnage to Chicago, the great central distributing point of the United States, would be much greater than to New York, the average cost of carrying traffic from San Francisco to Eastern points would be much less by rail than by water. As the tonnage originating in California would even be many times greater than that seeking the United States from the Orient, it must be evident that it is especially important that we improve our trans-continental railways if we hope for commercial growth between our Pacific and Atlantic coasts. This is of first importance if the widely separated States of our Union, with antagonistic interests, are to be kept together by common purposes and common devotion to our flag.

Not 20 per cent. of our material resources are developed to-day. Those resources can be made available only by cheap inland railroad transportation. This fact is absolutely undeniable, and the people of the United States should ever have that fact in mind when they are asked to build canals in the antipodes. The perfecting of a great railroad thoroughfare from the Pacific Coast to the Missouri River, operated under the direct control of the United States government, is to-day an absolute necessity, if we are to inaugurate another period of development and prosperity in our country. With such a thoroughfare it would be possible to reduce cost of transportation, which would enable us to develop our resources and cause such a steady rush of population to Colorado, Utah, Nevada, California, and other far Western States, as would exceed that of the palmiest days of our nation. The local business created in that vast territory by active, energetic Americans, would surpass our wildest dreams. That business would mingle with the Oriental commerce we would attract to our ports, and could be carried across our continent at a cost enabling us to control the wealth of the world.

Either the United States or Russia and Siberia are destined within the next quarter of a century to be the industrial and commercial wonder of all ages of the world. If the United States are to seize the scepter of Commercial Empire, we must act

immediately. But that action must not be in the mistaken line of canal building, and emphatically not in Nicaragua.

It is impossible, in the light of history, to conceive of the merchant princes of Venice, when that republic was at the height of its power and glory, and in control of the commerce of the world, deliberately destroying their wealth, prestige, and power, and even their national life. For all know that would have been the result had the Venetians built, equipped, and manned vessels for the Portuguese to inaugurate and complete their explorations for opening the water route by Good Hope to India, China, and Japan. Can Americans perpetrate the stupendous folly of building and equipping the Nicaragua Canal for the commercial navies of Great Britain, Germany, France, and other European nations, insuring a diversion of the Old World commerce which will leave the United States hundreds of miles from the line of inter-continental commerce? If so, we will dig the grave of our own greatness, and throughout time "American" will be the synonym of all that is supremely foolish.

If, however, the policy of developing our system of railroads, by the use of every modern appliance for lessening cost of operation, be made the chief object of our efforts, we can in the near future deliver our breadstuffs and other commodities in Europe and Asia at prices enabling us to undersell the civilized world; we can cause the trade of China, of Japan, and of the ancient East to seek our shores and cross our continent, dropping on its way riches among our people. Thus can we create an empire rivalling in opulence and splendor the greatest the world has ever known.

J. A. LATCHA.